Wilkes University
Center for Environmental Quality
Wilkes-Barre, PA 18766

August 8, 2011

Ex. 6 - Personal Privacy
Dimock, PA 18816
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Re: Laboratory Results 10402

The following are the results of the water sample that you submitted

Lab Number Parameter	Maximum Contaminant Level	Units	10402
pH	6.5 - 8.5	pH units	7.64
Conductivity	no standard	umohs/cm	301
Alkalinity	no standard	mg $CaCO_3$ / L	113
Total Hardness	no standard	mg $CaCO_3$ / L	160
Chloride	< 250 mg /L	mg / L	16
Sulfate	< 500 mg/L	mg / L	12
Nitrate + Nitrite	< 10 mg N/L	mg / L	0.3
Turbidity Turbidity (filtered-0.45 micron)	< 5 ntu < 1 ntu	NTU NTU	3.43 *****
Total Dissolved Solids	< 500 mg/L	mg / L	180 (calculated)
TON (Odor Number)	< 3	Unitless	1
Saturation Index	Rec. $\pm$ 0.5	Unitless	-0.2 Near balanced
Copper (first flush) Copper (after flushing) Barium Strontium	< 1 mg/L < 1 mg/L < 2 mg/L no standard	mg/L mg/L mg/L mg/L	***** < 0.05 < 0.05 0.06
Iron (total) **Iron (dissolved)**	**< 0.3 mg/L** **< 0.3 mg/L**	**mg/L** **mg/L**	**0.08** ****
Manganese (total) **Manganese (dissolved)**	**< 0.05 mg/L** **< 0.05 mg/L**	**mg/L** **mg/L**	**0.05** ****
Zinc (first flush) Zinc (after flush) Tannin Levels	< 5 mg/L < 5 mg/L no standard	mg/L mg/L mg/L	***** < 0.05 *****
Calcium	no standard	mg/L	see hardness
Magnesium	no standard	mg/L	see hardness
Sodium	no standard	mg/L	2.1
Potassium	no standard	mg/L	0.50

Nickel - < 0.05 mg/L
Lithium - < 0.05 mg/L
Glycol Screening Test - < 1 mg/L
Detergent Screening Test - < 0.25 mg/L
Phenol Screening Test - < 0.1 mg/L

Lab Number Parameter	Maximum Contaminant Level	10402
Total Coliform	< 1 Colonies / 100 ml Or Absent	**Negative**
LTB Confirmation	None	**Negative**
BGLB Confirmation	None	**Negative**
Fecal Coliform e. coli	Colonies / 100 ml Present/Absent	Negative Negative
Shock Disinfection	**Yes/No**	**YES (Because of the IRB-Iron Related Bacteria)**

IRB - Iron Related Bacteria - We conducted a BART Test - the reaction was positive in one day. This suggests the concentration in the water could be as high as 140,000 colonies per ml. These bacteria are associated with aesthetic problems with the water and may account for significant variations in the level of iron and manganese in the water.

The level of iron and manganese exceeds the secondary drinking water standard. This standard was set for aesthetic reasons and not because of a primary health concern. The turbidity was elevated, but not above 5 ntu. It is likely that the turbidity is associated with the presence of iron and manganese in the water.

Based on the available informational water testing results, the following evaluation may be needed:

1. Shock disinfect well and distribution system and retest for the level of standard plate count, iron related bacteria, iron, and manganese.

2. If the levels of bacteria are high, it may be advisable to inspect the well to make sure it is properly constructed.

3. If there does not appear to be any structural weaknesses, it may be advisable to install at treatment system that includes a disinfection/ oxidiation/ filtration components as part of the system.

4. The findings are based on the available water quality data generated by this analysis and based on the sample that was submitted by the homeowner.

If you have questions, please contact Mr. Brian Oram at 570-335-1947 or bfenviro@ptd.net please put your laboratory number in the subject.